DOCUMENT RESUME

ED 349 576 CS 213 534

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TITLE A Program To Help College Bound Students Improve Their Verbal Scholastic Aptitude Test Scores.
PUB DATE Jul 92
NOTE 53p.; M.S. Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *College Bound Students; High Schools; Program Descriptions; *Program Effectiveness; *Scores; *Test Coaching; Test Wiseness; *Verbal Learning; Writing Skills
IDENTIFIERS High School Juniors; *Preliminary Scholastic Aptitude Test; *Scholastic Aptitude Test

ABSTRACT

Improving the verbal scores on the Scholastic Aptitude Test (SAT) of a group of 20 high school juniors was addressed by the implementation of an SAT coaching program. A computer program, "SAT Success," and a video, "SAT Prep Video," along with practice tests from the Educational Testing Service were employed. Students were self-paced through a 12-week period, reviewing skills and practicing types of questions found on the SAT. Simulated written tests were given throughout the program and a final comparison of the Preliminary Scholastic Aptitude Test (PSAT) and the SAT verbal scores were utilized. The results indicated improvement of SAT verbal skills for the target group (only 12 of whom completed more than half of the program) as compared to a group of students in the same school who did not participate in the program. (One table of data is included; 19 references, a student survey on SAT preparation time, and three appendixes containing relevant data are attached.) (Author/RS)

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A PROGRAM TO HELP COLLEGE BOUND STUDENTS IMPROVE THEIR VERBAL SCHOLASTIC APTITUDE TEST SCORES

by

Alan B. Teague

U.S. DEPARTMENT OF EDUCATION
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CS213534

A Practicum Report submitted to the Faculty of the Center for the Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Master of Science.

The abstract of this report may be placed in a national Database System for reference.

July/1992

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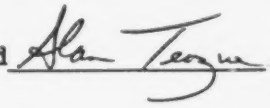
Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

Signed 

Abstract

A Program to Help College Bound Students Improve their Verbal Scholastic Aptitude Test Scores.
Teague, Alan B., 1992: Practicum Report, Nova University, The Center for the Advancement of Education.
Descriptors: Secondary Education/Test Coaching/College Entrance Examinations/Aptitude Tests/Standardized Tests/Predictive Measurement/Verbal Ability/Admissions Testing Program/Scholastic Aptitude Test/Preliminary Scholastic Aptitude/

Improving the verbal scores on the Scholastic Aptitude Test (SAT) of a group of high school juniors was addressed by the implementation of an SAT coaching program. A computer program, SAT Success (Stanford Testing Systems, 1989), and a video, SAT Prep Video (Levin, 1988), along with practice tests from the Educational Testing Service were employed. Students were self-paced through a 12 week period, reviewing skills and practicing types of questions found on the SAT. Simulated written tests were given throughout the program and a final comparison of the Preliminary Scholastic Aptitude Test (PSAT) and SAT verbal scores were utilized. The results indicated improvement of SAT verbal skills for the target group as compared to a group of students in the same school who did not participate in the program. Appendices include graphic analysis of progress, comparisons of scores before and after implementation, SAT Success skills analysis, and student data.

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Chapter I

PURPOSE

The setting for this practicum was in a private school established in 1961, located in the Northwest area of Dade County. The school building is two stories and houses kindergarten thru twelfth grades. The total student population is 1,150 with a total of 74 teachers with 34 faculty members in the secondary school. The writer has been employed at this school for eleven years and is a twelfth grade English teacher and part time guidance counselor.

The students come from various neighborhoods in Dade and Broward Counties. The majority of the students come from middle to high-income families. Tuition is $3,490 per student each academic year. Financial aid is available for families showing a financial need.

Parents choose to send their children to this school for a variety of reasons. Among these reasons is the parents' belief in a strong academic program and the reputation of the school in the community. Although this school does not classify itself as a college preparatory school, the majority of the graduates do

continue post-secondary education--90 percent in 1991 and 91 percent in 1990. In the past two years, graduates have matriculated to both private and public colleges and universities. Some of these include: Barry, Belmont, Duke, Leheigh, Florida International, Florida State, Stetson, Syracuse, University of Florida, University of Miami, and Washington University.

Parents are very cooperative with responding to conferences, phone calls and notices sent home; because they are paying tuition, they are concerned with the quality of education their children receive. Although the writer of this practicum understands that college admissions are not based solely on Scholastic Aptitude Test (SAT) scores, parents are concerned that if their child's scores are not above average, they will not be accepted to the college of their choice. The nationwide attention that has been placed on SAT scores as a measure of student progress has helped flame this concern. Some parents have taken it upon themselves to find tutors or programs to help improve their child's SAT scores. This practicum was implemented to meet the need of raising verbal SAT scores of college bound students.

Since 1976, a major concern in education has been the steady decline of SAT scores. Recent nationwide attention has placed great emphasis on the SAT as a measure of student progress. The test is supposed to be a predictor of how students will do in college and is used by college admissions officers in the selection process. Many college admissions officers claim a greater emphasis is placed on all the elements of a student's school records than just SAT scores. Regardless of what formulas admissions officers use, standardized test scores can mean the difference between admission to a mediocre institution and enrollment at a more selective one. Robinson, as cited by Wilson (1990), who has tutored for the Princeton Review, the largest SAT preparation course in the country, stated, "It is hypocrisy when colleges say the SAT has been overemphasized and one of the first things kids see when they look at a college's brochure is the average test scores...." (p. A34)

Although test scores are continuing to drop as a whole, a nationwide survey by the College Board as reported by Lockerbie (1990) found that 54 percent of the colleges responding indicated receiving higher test

scores from current applicants than from applicants in previous years. For example, Pomona College in California reported 45 percent of the 1989 freshman class scored over 700 out of 800 on the SAT math section. Cornell University in New York reported 80 percent of its 1991 freshman class scored over 500 on the SAT verbal section. Amherst College in Massachusetts, another private school, reported over 90 percent of its 1991 freshman class scored 500 or above on the SAT verbal section.

With this increase in scores, comes an increase in competition for places in the most competitive colleges and universities. Florida International University reported 5,000 applications in 1990 for 1,400 places (Brown, 1991). Dartmouth College, one of a group of highly selective colleges, accepted about 1,800 of its 9,000 applicants. Connecticut College in New London received 3,223 applications for 475 freshman positions (Lockerbie, 1990).

Though college admission policies differ with each individual school, it stands to reason that the most qualified students will not only be those who have taken the most rigorous course loads, have the highest

grade point averages, and have the highest class rank, but also those who have the highest SAT scores. According to several surveys, about 25 percent of all high school students take some type of test preparation course for the SAT. About 30,000 students each year sign up for courses offered in 45 cities by the Princeton Review (Wilson, 1990). A problem exists for those students who have not had the advantage of an SAT preparation class if the classes truly do help raise scores. Furthermore, the coachability of the SAT has important implications for its use in the college admissions process. If students can in fact increase their scores without the requisite increases in aptitude, then the SAT can be a misleading and inappropriate indicator of potential college performance.

The College Board Admissions Testing Program (ATP) (1991) discourages coaching and costly preparation courses, but suggest the best preparation is to know the format of the test. This includes knowing how the test is organized, the kinds of questions asked, the terms and concepts used, how it is timed, and basic rules about guessing. The ATP admits, "If you do not have

this information, you may be at a disadvantage in taking the test." (p. 8)

In education a problem is perceived to exist when there is a discrepancy between what is and what is expected. In 1991, students attending independent or private high schools across the nation had the highest reported verbal scores of 470 on the SAT, compared to the public school average in the nation of 422, in the state of Florida of 416, and in Dade County of 381. Forty-one students in the setting for this practicum who took the SAT in June of 1991 averaged 411 on the verbal section, fifty-nine points lower than the private school national average.

A survey of these students found that 31 percent spent no time in any type of preparation between taking the PSAT and the SAT. An additional 23 percent spent less than one hour in any kind of preparation. Fifty percent of the group believed unfamiliarity with the type of questions and lack of reviewing for the test attributed to lower test scores than their lack of basic English skills (see Appendix A:36).

It is difficult to assess what part coaching or preparation classes play in improving SAT scores. Some

students pay as much as $645 for courses offered by Kaplan and Princeton Review, the two biggest test-coaching companies. Coaching companies typically guarantee score improvements between 150 and 200 points (Wilson, 1990). The biggest dispute between coaching companies, the College Board, and high school and college counselors centers on the extent to which coaching improves test scores.

Opponents of coaching say the methods used by coaching companies to measure gains are "either unscientific or misleading." They also say students who take the SAT are highly likely to improve their scores, regardless of whether they are coached. The College Board sells books and computer software to help students prepare for the test. But in their own literature they discourage test-taking courses, especially expensive ones. In a student bulletin (1991) written to assist students preparing to take the SAT, the board said, "Despite decades of research, it is still not possible to predict ahead of time who will improve and by how much--and who will not." (p. 12)

Robert Schaeffer, public-education director at the National Center for Fair & Open Testing, says coaching

is effective. He says coaching that improves students' scores shows that the SAT measures test-taking ability rather than aptitude. Stanley H. Kaplan, the founder of the Kaplan Testing Center, agrees with the exam's makers that the SAT measures critical thinking. Kaplan, as cited by Robin Wilson (1990), said, "Knowing how to pass tests is a pervasive need, and there is nothing that you can't get experience and confidence in to boost your performance." (p. A34)

One study by DerSimonian and Laird (Dyer, 1987) evaluating the effects of coaching concluded

> ...that there is simply insufficient evidence that large score increases are a result of a coaching program. We conclude that there is evidence in the data to support a positive effect of coaching. However, the size of the effect which we can safely attribute to coaching is so small to have much attraction either for individual examinees or for educators. (p. 46)

On the other hand, a study undertaken as part of a Ph.D. dissertation at Harvard University showed that a group of New York students who took the Princeton Review's course gained about 110 more points, on the average, in retaking the test than did another group of students who were not coached (Wilson, 1990).

In light of the controversy surrounding preparation courses and their effectiveness, it was the intention of

this practicum to implement an SAT preparation program to help juniors raise their PSAT scores.

Many colleges, because of federal and state budget cuts along with those that have highly selective admissions policies, tell students to apply early in their senior year. Many seniors do not have the time to take a coaching course, take the SAT, and wait for their scores in order to meet early deadlines. Instead of allowing an entire summer to pass after the junior year, it is more advantageous to take the initial SAT at the end of the junior year.

Of the 41 students in this school setting during the 1990-1991 school year who took the SAT at the end of their junior year, the highest verbal score was 630 and the lowest verbal score was 230. The average verbal score was 411. This same group of students had taken the PSAT in October of their junior year. The average verbal score was 373. The average difference as measured by the PSAT and the SAT was 38 points. Approximately 33 percent of these students raised their scores by 50 points (see Appendix B:37).

The target group for this practicum was a group of 20 juniors who took the PSAT in October 1991 and

scored an average of 366 on the verbal section. Over a period of twelve weeks, 60 percent or more of the students participating in the practicum were expected to obtain a score increase of at least 50 points on the verbal section of the SAT as measured by the difference between a PSAT pretest and an SAT posttest.

Chapter II

RESEARCH AND SOLUTION STRATEGY

Though the controversy exists surrounding the ability of preparation courses to help raise SAT scores, there is increasing evidence which shows that intensive preparation for the SAT has a positive impact on test scores. Cole, as cited by Comras (1984), expressed the benefits of coaching when she said:

> The ideal situation would permit all test takers to take any ability test after practice with the test, with maximal motivation, with optimal levels of test anxiety, with maximal testwiseness, and after a review of relevant, previously learned material or new substantive learning. (p. 56)

There is some indication that coaching is more effective when it is focused specifically on practice and understanding of SAT-type items. Messick and Jungeblut (1981) found that program effects increased with student contact time. Using a logarithmic function analysis, they computed average score effects as related to the number of contact hours for 17 verbal and 14 math studies. DerSimonian and Laird (1983), in a meta-analysis of published SAT test preparation programs, found program effects differed by the type of evaluation model employed.

Zuman (1988) conducted experiments beginning in the spring of 1986 in New York City with two groups of eleventh graders. One sample consisted of students who had previously registered for a coaching course and the second group consisted of a low-income minority group who received scholarships to take the same coaching course. The fall 1985 PSAT was used as the pretest.

The coaching course consisted of 27 hours, two separate sessions, one for English and the other for math. The English sessions stressed practice on SAT-type items using the Educational Testing Service publication 5 SATs . Teachers also discussed particular techniques and strategies for individual test items. The English sessions also stressed vocabulary development from a compiled list of words. Students were assigned homework of solving practice items from the workbook.

Three practice tests were taken during the course. Following these practice tests the items were reviewed and analyses of the responses were given. The results of Zuman's study found a correlation between Grade Point Average (GPA) and verbal SAT scores. If two coached students had identical PSAT scores, it was found that the student with better grades in school scored higher on the verbal section of the SAT.

The effect of the coaching course on those students who had originally registered for coaching had mean gains of 52 points from the fall 1985 PSAT to the May 1986 SAT. The coaching for the scholarship students had no significant effect on the verbal scores. There was an average increase of 4 points after coaching. The results of this study support the conclusion that an intensive, well-planned course focused on SAT-type questions can have a significant effect on increasing students' SAT scores.

Zuman addressed the issue as to why the coaching program was differentially effective for the regular and scholarship students. Among his conclusions were that the teachers had no prior experience teaching minority students. Instructors pointed out that many of these students came from families where English was a second language and their vocabulary was limited. The instructors concluded that the scholarship students were bright, but came to realize that these students had not been taught the basic verbal and math skills necessary to do well on the SAT. Other variables which may have resulted in the smaller increase in performance for the scholarship students were less instructional time due to location changes and irregular starting times.

In this study, the average combined PSAT scores of the regular student sample was more than 350 points higher than for the scholarship student sample. This difference was an indicator of the discrepancy in the quality of schooling experienced by the two groups.

Results of a study by Worsham & Austin (1983) in the Baltimore City Public School System suggest that the inclusion of structured cognitive skills introduced into the language arts curriculum was responsible for improved performance on the verbal SAT test. The study was limited to 139 students in one urban senior high school. The experimental group consisted of 87 seniors from the 1982 class who participated for three semesters in a pilot program involving use of the Think language arts material published by Innovative Sciences, Inc. All 139 students took the California Achievement Test (CAT) and the SAT. Significant differences were found between the scores of those who participated in the two hour per week Think program and those students in the control group who were not exposed to the treatment. A mean increase of 42 points was realized by the experimental group--15 percentiles higher than the control group. This study seems to indicate that SAT verbal scores can be improved over time through the inclusion

of cognitive skill development. It is interesting to note that about 100 hours of instruction went into this program.

Several studies have been conducted to demonstrate that students could significantly improve their scores through the use of computer programs. Coffin (1988) studied the influence of two different software programs in Boston's inner-city schools. His first study used the Hayden SAT prep program, which was found to be difficult to understand and offered no immediate feedback. Using the software entitled TestSense, published by the College Board, students were able to analyze their responses. According to Coffin, TestSense is an integrated program of software and printed materials. It familiarizes students with the PSAT and helps them assess and improve their test-taking techniques. The analysis helps the user identify strengths and weaknesses on different kinds of questions. The study found that students who used TestSense had greatly increased confidence in what they were doing and in what to expect on the test. They also liked using the computer because of the instant feedback. The result was an increase in the mean score of 50 points on the verbal section.

Bialozor (1991) reported positive results in a study using computer software, Mastering the SAT. The program consisted of four diskettes which included an introduction, a five section pretest, skill builder exercises, a five section posttest, and a section capable of scoring and analyzing individual student performance. In his study, the fewest number of hours logged for use with any one student was 12.5 while the greatest was 21. An average time for all participants was approximately 18.5 hours. The results of this study suggested that computer-assisted instruction (CAI) aided students in attaining higher scores. There was a difference of 187 points over the control group.

Scholastic aptitude scores have been held by many to not be subject to improvement as a result of limited amounts of drill. However, the potential for more effective drill as a result of the controlled interaction permitted by CAI has been shown in several studies.

In a report by Caplan and O'Rourke (1988), the DeKalb County School System in Decatur, Georgia implemented a successful approach for improving student achievement of the SAT. A task force was organized early in the fall of 1983 in the school system to

develop a comprehensive plan for improving SAT scores. The task force set out to determine what strategies should be implemented. Some of their objectives included:

1. To encourage more students to take the PSAT.

2. To implement a staff development program for teachers designed to improve their teaching of the higher level cognitive skills as well as their awareness of SAT test content.

3. To identify where SAT verbal and math skills/concepts were found in the high school curriculum.

4. To develop a resource list of materials designed to improve PSAT/SAT scores. (p. 55)

The task force was concerned that available research was inconclusive regarding the effects of coaching for the SAT. The school system launched a summer program that drew 56 students from 16 different schools for an intensive, eight-day, 32-hour content review and SAT test-taking techniques.

Although the experiment did not distinguish what curriculum was used, all materials including computer software, were later distributed to local schools. The seminar participants gained an average of 109 points between a mock pretest and posttest assessment on a sample SAT. After implementation in the 1984-85 school year, the systemwide scores on the SAT showed an

increase, with some schools gaining as many as 50 points over the previous year.

The question of the effectiveness of coaching for tests such as the SAT is a matter of concern to many besides researchers. It is apparent from reviewing the literature that published evidence on the effectiveness of coaching is ambiguous, but organized efforts to coach students are proliferating rapidly.

A recent article by Acle (1991) published the average scores of each of Dade Counties' public high schools. The article identified a large number of schools in the Northwest areas of Dade County that planned to implement preparatory classes in some form during the 1991-1992 school year.

> Of about 37,000 eleventh and twelfth graders in Dade public schools, fewer than 2,000 are enrolled in either a math or verbal skills preparation class offered at their school. `If more students would take these courses, we believe our test scores would improve,' said Frank de Varona, Associate Superintendent of Dade Schools' Bureau of Education. (p. 12)

According to Acle, Dade Counties' Superintendent of Schools, Octavio Visiedo, has encouraged all high schools in the system to offer exam preparation classes.

The belief in the effectiveness of coaching for the SAT was recently substantiated by the Florida

Department of Education. It purchased the rights to allow school systems to reproduce computer software to be used in preparation classes. Administrators are distributing over 1,100 sets of software to Dade high schools.

A variety of methods and courses are already being used at many local schools as reported by Acle (1991). At Coral Park High School, the SAT preparation program consists of a study hall where students work independently on computers. Jackson High offers semester classes taught by math and English teachers and uses an SAT study guide along with computer software. Students take practice tests on the computer and they receive a printout of how they scored and where mistakes were made. The course in verbal preparation consists of taking practice tests, of developing reading comprehension skills and improving grammar skills.

Other schools offer a variety of methods to try to improve scores. Carol City High began preparation classes in October of 1991 on Saturday mornings for the general student population. Athletes who take a weight training class must also take an SAT course taught by librarians. It is offered during football season during school hours. Hoping to raise reading and vocabulary

scores, Hialeah-Miami Lakes stops all school action every Wednesday and requires everyone to silently read anything they like for 30 minutes. Hialeah High School officials began an experimental program in 1989 in place of teaching test-taking skills in an actual preparation course. Three hundred sophomores were randomly selected by computer and placed in special classes where critical thinking skills were stressed. Although SAT scores for these students will not be known until the end of the 1992 school year, students did do better on the Florida High School Competency Test than students who were not in the classes.

Not only are local high schools offering preparation classes but so are local colleges. Miami-Dade Community College-North offers seven four hour sessions on Saturdays at a cost of $60.00. According to Robert Lowry, course coordinator, the curriculum offers practice tests and review of testing strategies by English and math professors. Florida International University offers a seven session course on Mondays, Wednesdays and Saturdays from nine to one at a cost of $225.00. According to an FIU official this is a program dealing entirely with a review of skills and strategies and practice tests without the use of computer assistance.

In the selection of a solution strategy the following criteria by Weiss, Beckwith, and Shaeffer (1989) were found to be extremely useful.

1. Does the method teach you how the SAT is structured and scored?

2. Does it teach test-taking skills you can absorb in a few minutes?

3. Does it include questions from real SATs?

4. Can it target strengths and weaknesses?

5. Does it contain an unrealistically long list of vocabulary words?

6. What is the track record?

7. What guarantees are offered? (pp. 51-52)

With these criteria in mind, several different options were examined.

One option was a system called In-A-Flash. No research was found to substantiate the claims of the entrepreneur who created this method; however, Schroeder (1988) reported on Jim Genstein who created a business using flash cards as a review for the SAT. His sales hit over $250,000 in one years time. These cards use humorous drawings to illustrate words and mathematical concepts. On one side of a card is a picture and on the other side is a formula or a definition and columns of similar and dissimilar words. Each 50 card verbal set contains over 500 words and sells for a modest $9.95.

It is obvious to the writer that this system looks more like a gimmick than a verifiable way to prepare for the SAT. This system of flash cards may be useful for some students as a review of vocabulary words but not as a skills builder.

Another solution strategy examined was Thinking Your Way to Better SAT Scores. This is a Public Broadcasting video seminar adapted from a live, national teleconference by Dr. Gary R. Gruber. The 70 minute video reviews verbal strategies and offers a manual which includes key strategies and some practice exercises. In the opinion of the writer, this $125 video would make a good supplement for a preparatory program. It does not offer actual SAT tests nor feedback and analysis.

Another similiar video is entitled SAT Prep Video. This video, prepared by Fran Levin founder of College Bound Productions, comes with a simple and short workbook of 24 pages. The 60 minute tape and workbook cannot be reproduced. The workbook provides simplistic examples, but the tape is quite valuable. It is broken down into nine segments. The sections on word analogies, sentence completions, and reading comprehension were found to be very instructive. Plenty

of examples and explanations are given. This tape, which costs $49.95, is an excellent tool for reviewing and would be especially helpful as an introduction to the PSAT or SAT. It could also be valuable as an introductory tool in a preparatory course.

Workbooks, 5 SATs and 10 SATs , are actual verbal and math tests produced by the Educational Testing Service. The introductions to both of these books tell the reader that other than helping the student to become familiar with the test, the use of the practice tests are probably of limited value. These practice booklets discuss topics such as: what the SAT measures, the format of the test, kinds of questions, and rules of good-test taking.

Practice tests are excellent for evaluation purposes and can be used as an extension of a preparatory course. Practice tests can point out strengths and weaknesses, if enough of the tests are taken and if the test taker analyzes the results. Feedback is provided with the answer keys. The books cost around $10 and provide an option for helping students improve their scores through practice.

Several articles consulted during the research for this practicum upheld the beliefs of the writer as

to the effectiveness of computer-assisted instruction. Research by Knight and Dunkleberger (1987) upheld findings that computer-assisted instruction was academically effective. Their findings discussed the fact that students require immediate feedback and manifest more positive attitudes toward such feedback through computer activities rather than regular curriculum instruments; that students preferred computer assisted instruction to individual or self-study; and that attitudes become more positive as the result of direct computer involvement. Clingan (1987) underscored the importance of computer-based interaction with providing active participation and in learning activities to develop new concepts or better understanding. This type of teaching also showed that retention increased with direct exposure.

A software program produced by the National Association of Secondary School Principals called Essential Skills for the SAT (1989) was also examined. The program provides a detailed review including a full-length simulated test that may be taken as an actual test in which answers are revealed only when the student completes the test or as a tutorial providing feedback, explanations, strategies and a second-try

option. The cost of this program is $79 and the writer believes this would be an excellent quick review for a student who has a limited amount of time to spend in preparation.

The Barron's Computer Study Program, which sells for $90, is a study plan designed for the individual test preparer. The materials consist of 3 double-sided diskettes for the Apple II computer, an SAT text of 673 pages, 2 SAT workbooks, and a user's manual. This program seems to focus more on taking the completely written diagnostic tests and entering the answers into the computer than focusing on review drills. The test taker is provided an analysis and given study assignments in weak areas. Three sample SATs are provided. This study program offers the advantage of the written tests and quick analysis by the computer. Since all the materials are protected by copyright, this program would benefit the individual who is interested in independent self-preparation.

Another computer program, SAT Success by Stanford Testing Systems in California, was examined and found to be a very practical option for a preparatory course. The software program is more costly than some others,

$373, but it includes: skill diagnostic software with Apple II and IBM PC diskettes which contain 53 on-screen quizzes organized by skills; a skill-review manual; a skill workbook; workbook answer key; and a software user manual.

The program diagnoses 45 math and verbal skills and suggests six skills for each student to work on, shows the student how to apply the skills to the SAT, then quizzes the student as a reinforcement on one skill at a time. The skill diagnostic software uses official College Board printed SATs. Advertisements, with educator's recommendations, claim that over 1000 schools use SAT Success with reported score increases of 100 points or better.

Another feature of SAT Success is the benefit to reproduce free, unlimited copies of software, manuals, and skill workbooks. Standford Testing Systems also guarantee when the SAT changes in 1994, software updates will cost only $35.

In comparing the numerous videos, workbooks, and computer software available and after examination of the approaches of other schools, it was decided that the SAT Success computer software would offer the best solution strategy for this practicum setting. Because the

implementation of the practicum was to continue for twelve weeks, it was decided that the technology of the computer would best benefit the students and maintain an acute level of interest.

Some of the computer programs examined were similiar but SAT Success seemed to offer more drills than some other programs. It also breaks down the overall sections of the SAT tests into smaller subsections that can be dealt with individually. Unlike some other programs, this one also uses actual practice tests. It is believed that this program offers the realities of taking the SAT along with the quick feedback and diagnostic ability of the computer.

The capability to reproduce the materials is also an advantage. This means that students will have access to the materials with less cost than materials that must be purchased for each student. With the proposed changes for the SAT in 1994, the offer of updated materials also made SAT Success a favorable choice.

Chapter III

METHOD

In order to begin implementation of this strategy, several tasks had to be performed. The first task was to discuss the options with the building administrator, who was also the practicum observer. The cost of the program, use of the computer lab, time requirements, student recruitment, monitoring and projected outcomes all needed to be discussed. After approval, the steps in the implementation began.

The first step was to seek student interest and participation. This program was first introduced to the junior class in late December when the PSAT scores were returned. The writer met with the students to discuss the Report of Student Answers (ROSA) and their interpretation. At this time, discussion included a time line for juniors to begin the college search. Information was given on scholarship searches, SAT scores, general admission policies, and entrance requirements.

During the last week of February, a letter was sent home to parents with details outlining the

preparation course, including days and times. Juniors were met with again and were given details and registration information. Since this was not to be a credited course and did not fit into the time frame of the regular school day, it was decided to offer the course one evening per week for 12 weeks. In the meantime, program disks and printed materials were reproduced. The projected date for beginning the program was the second week in March.

The implementation began with a target group of 20 students who chose to be a part of the program. Students met on Thursday evenings for twelve consecutive weeks for one to 1 and 1/2 hours per session. Data was kept detailing how much time each student spent with the program. The first session began with a brief introduction concerning the steps to be taken during the coming weeks. Students were introduced to the four different types of verbal questions- antonyms, analogies, reading comprehension, and sentence completion. Strategies concerning educated guessing and information about how the SAT is scored were taught.

Initially, it had been decided that the computer program SAT Success was the favored resource to be used

in this practicum. Of the 20 students who began the program, only 12 completed six to thirteen hours. Of the twelve, seven had no prior computer experience; however, because of the ease of the format these students had no difficulties. They were introduced to the major components of the computer, how to boot the program, and were given a preview of the program format.

The target group began with an actual verbal test from Taking the SAT by the College Board. It was scored utilizing the SAT Success program, and a computer printout broke the test down into subsections showing students their strengths and weaknesses (see Appendix C:45). The students were given the Taking the SAT practice book to take home and encouraged to do the practice tests before the next session.

Another useful resource was Fran Levin's SAT Prep Video. The 60 minute video was shown in short segments throughout the 12 weeks. The first few minutes were shown during the second session to introduce students to the test format, test taking strategies, and pacing while taking the SAT. Short segments lasting from 7-16 minutes were shown throughout the implementation to teach students the best ways to approach each of the

four areas of the verbal test. Students enjoyed interacting with the video as a group. For example, they tried to see who could be the first person to come up with the correct answer to the sample questions. The video was a practical tool, for many students had never been taught the different types of analogies nor how to think through the process of eliminating answers.

SAT Success offered students practice drills over the various types of verbal questions. The video provided instruction and taught strategies. The SAT practice tests from Taking the SAT and 10 SAT's gave the students simulated written practice. All of these resources complimented each other and added variety to the 12 weeks of implementation.

After the first session using the computer, the choice of program area was left to the students, and their selections were greatly influenced not only by each student's strengths and weaknesses and existing biases, but also by the selections of peers. Several students chose the same area during the first few weeks. Although none of them actually worked at the same terminal, they often compared results. Some students felt "safer" working on the same section and from time

to time discussed some of the answers and the logic used in coming up with an answer.

The actual length of time spent in each verbal area varied for each student, depending on variables such as individual ability, prior knowledge, level of difficulty, and existing biases toward the area. Most students seemed to gravitate toward the analogies and antonym practices initially, then the vocabulary quizzes and sentence completions. The reading comprehension drills seemed to be the least enjoyable and the least used in the program. When questioned, some students admitted the reading passages were too long or boring.

Seven weeks into the course a 30 minute verbal test was given from 10 SATs. Students were able to compare the difference between the scores from the first practice test and the second practice test. A final 30 minute practice test was given during the last class session. These tests simulated the actual SAT-taking situation. The tests were computer-scored using the SAT Success program and the students were provided an analysis of their responses which showed them their progress. Table one shows the comparison of student scores on each of the three 45 question verbal tests. The final task was completed when the participants took

the official June 6, SAT at the end of the 12 week implementaion period.

Table I

A comparison of scores
of the three
SAT verbal tests

Student #	PT#1	PT#2	PT#3
1	15	17	18
2	18	21	21
3	19	22	25
4	17	A	20
5	16	20	24
6	14	17	22
7	19	21	A
8	14	17	19
9	15	15	18
10	19	21	20
11	15	19	19
12	20	20	24

PT-Practice test
A-Absent

Chapter IV

RESULTS

After the students in the target group took the official SAT in early June, it was a matter of waiting for the test results in order to measure the effects of the solution strategy. The stated objective of the program was that 60 percent or more of the targeted students would increase their verbal PSAT scores by 50 points or more as measured by the SAT posttest. An evaluation as to the success of the program was determined by examining what percentage of the target population raised their verbal SAT scores.

Of the twelve students who participated, 100 percent raised their original PSAT verbal scores. The smallest gain was 10 points, and the largest gain was 140 points. A total of six students, or 50 percent, had score increases of 50 points or more. Although the percentage of students who raised their scores was 10 percent below the 60% objective, this does not mean the program was not a success. After comparing the scores of the target group to the scores of those not in the program, it was determined that the practicum implementation was beneficial.

It is interesting to note that all of the participants in the target group raised their scores. The combined average of the twelve students' verbal PSAT was 359. The average verbal score of the posttest, the SAT, was 460. This is a 101 point increase. Sixteen other students who did not participate in the program had an overall average of 352.5 on the verbal section of the PSAT. Their average verbal score on the SAT was 353.75. This is only a 1.2 increase. Seven, or 45 percent of this control group, raised their original PSAT score. The score increases ranged from 20 to 60 points. One of the most interesting observations was that in the target group there were no students whose verbal scores decreased from the original PSAT. In the control group, seven students lost points ranging from -20 to -130. Two other students had scores that did not change (see Appendix D:46).

Because only 50 percent of the target group improved their scores by 50 points or more, and there were no score decreases from the original PSAT, it can be concluded that the use of the SAT Success program was beneficial for reviewing and improving skills. It is believed from the data of the score increases that if

more students had participated with the target group, the percentage of students improving their verbal scores by 50 points or more would have increased.

There is no evidence to show that the number of hours a student participated determined the amount of score increase. One student who spent 12.5 hours reviewing only had a score increase of 10 points. Whereas another student who spent 8.5 hours in the program had a score increase of 140 points. No pattern could be established to correlate the number of hours spent in the program to the number of points the SAT improved (see Appendix E:47).

There was only one intervening variable observed that might have affected the results. Because the classes began 12 weeks before the official SAT, attendance in the program was inconsistent. Attendance dropped off in the middle but improved near the end of the 12 weeks. Some of the students often arrived late. This was a problem because of the interruptions it caused. Those students who appeared to be the most serious about improving their SAT scores worked diligently. There were several students who had to be kept on task on occasion due to conversations with students arriving late.

Other than students coming late and inconsistent attendance, there were no problems to hinder the outcome of the practicum. The computer program was easy to use, and most of the students remained on task each session. The interaction with the computer was gratifying, and the skills analysis were beneficial in providing students with summaries of how they were doing. One of the best features of the computer program was the immediate feedback. Overall the participants seemed to enjoy the interaction with the computer, and it made the whole process of reviewing for the SAT less of a drudgery than it might have been otherwise.

Chapter V

RECOMMENDATIONS

With all of the concern and public attention given to SAT scores, the outcome of this practicum will have significant interest for parents, school personnel, and students. Since many parents are looking for preparation courses, this program may be an option to more expensive coaching courses. English teachers will be especially interested in the results and will be given the opportunity to review the types of drills and subsections of the program. The results of the program will also be shared with underclassmen who are concerned about improving their PSAT scores. The results of the program may be an incentive for these students in considering the merit of putting forth serious effort in reviewing for the SAT.

One of the main problems with the effectiveness of the implementation of this coaching program was the time schedule in which it was offered. Since the students were all participating voluntarily, there was no way to regulate mandatory attendance. Therefore the benefits of continuity and enough time spent reviewing were limited.

One evening per week for 12 weeks seemed to be too drawn out for most students. Since they were not getting credit or grades for the time, there were not enough incentives for students to attend regularly. Only those extremely self-motivated students maintained an acute interest, and even they had difficulty in attending consistently. If this program were to be offered again in the evening, then eight to nine weeks before the official SAT is scheduled may be a more reasonable time frame. A better option would be to offer the program two evenings per week for five to six weeks. All of the material could still be covered but in a more concentrated time.

A more favorable approach would be to incorporate the SAT Success program into the curriculum of a regular English class. This way the skills could be taught in the classroom, and the computer program could be used as an extension. In a school where the number of computers is limited, students could be rotated. While some students are viewing the SAT video and doing written problems, another group could be using the computer. All of the students would then benefit from the same material. Regular attendance would not be a problem and

more time could be given to help students develop better test taking skills. It would also improve the seriousness of practicing if students were doing the work during school hours. The teacher would not have the burden of planning and writing lessons because the skills, quizzes, and practice tests are already organized and part of the program.

This practicum only dealt with the verbal portion of the SAT. SAT Success is also programmed to review the types of math problems on the SAT. Actually there are more skills and practices for math than there are for English. The same strategies for teaching the verbal skills could also be used for teaching and reviewing math for the SAT.

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Appendices

Appendix A

Student Survey-SAT Preparation Time

Please read each question and circle the appropriate response.

1. Before you took the SAT last spring, how much time did you spend in preparation (reading tips for taking the test, using practice test, etc...)?

   A. None
   B. 0-1 hours
   C. 1-3 hours
   D. 3-5 hours
   E. More than 5 hours

2. What, if any, kinds of preparation did you do?

   A. None
   B. Read the test taking tips
   C. Took at least one practice test
   D. Took more than one practice test
   E. Attended special classes or tutoring sessions

3. To which of the following can you attribute your score on the verbal section of the SAT?

   A. Poor English skills
   B. Not preparing for the test
   C. Unfamilarity with the types of test questions
   D. Good English skills
   E. Knowing and understanding the test format

4. Do you believe spending some extra time in preparation for the SAT would help improve your scores?

   A. Yes
   B. No
   C. Uncertain

Appendix B

Class of 1991 PSAT-SAT Comparison

Students	Verbal PSAT	Verbal SAT	Difference
1	200	230	+30
2	280	260	-20
3	330	270	+60
4	240	280	+40
5	340	280	-60
6	280	280	0
7	230	310	+80
8	320	320	0
9	310	330	+20
10	380	350	-30
11	360	360	0
12	310	360	+50
13	350	360	+10
14	310	360	+50
15	290	360	+70
16	400	360	-40
17	330	380	+50
18	280	380	+100
19	340	380	+40
20	380	380	0
21	300	390	+90
22	430	390	-40
23	380	390	+10
24	380	390	+10
25	360	410	+50
26	420	410	-10
27	400	420	+20
28	410	420	+10
29	410	430	+20
30	380	430	+50
31	400	440	+40
32	410	450	+40
33	400	460	+60
34	380	460	+80
35	470	490	+20
36	510	510	0
37	460	530	+70
38	530	530	0
39	490	530	+40
40	490	550	+60
41	630	630	0

Appendix C
Practice Test
1990 Taking the SAT, Section 1 Verbal

Question	Answer		Primary Skill
1*	A	C	Antonyms
2	B		Antonyms
3*	B	D	Antonyms
4	E		Antonyms
5	C		Antonyms
6	E		Antonyms
7*	-	C	Antonyms
8	A	B	Antonyms
9*	-	D	Antonyms
10*	B	C	Antonyms
11	D		Antonyms
12*	B	A	Antonyms
13*	A	C	Antonyms
14	E		Antonyms
15*	-	C	Antonyms
16*	B	C	Sentence Completion
17*	B	A	Sentence Completion
18	D		Sentence Completion
19*	A	D	Sentence Completion
20*	C	E	Sentence Completion
21	C		Reading:Main Idea
22	A		Reading:Infer from Text
23*	B	D	Reading:Principle/Opinion
24*	A	D	Reading:Idea Stated
25	C		Reading:Idea Stated
26	C		Reading:Idea Stated
27*	B	E	Reading:Idea Stated
28*	A	D	Reading:Infer from Text
29*	A	C	Reading:Principle/Opinion
30	A		Reading:Text Development
31	D		Sentence Completion
32	A		Sentence Completion
33*	B	A	Sentence Completion
34*	-	E	Sentence Completion
35*	A	C	Sentence Completion
36	B		Analogy:Find Relationship
37	D		Analogy:Find Relationship
38	A		Analogy:Find Relationship
39*	D	C	Analogy:Find Relationship
40*	-	A	Analogy:Find Relationship
41	E		Analogy:Find Relationship
42	B		Analogy:Find Relationship
43*	D	C	Analogy:Find Relationship
44*	B	D	Analogy:Find Relationship
45*	C	B	Analogy:Find Relationship

Appendix D

Comparison of PSAT to SAT scores

Target Group

Student	PSAT	SAT	Difference
1	250	390	+140
2	300	390	+90
3	310	370	+60
4	320	360	+40
5	330	400	+70
6	340	360	+20
7	380	440	+60
8	380	490	+110
9	400	410	+10
10	400	480	+80
11	410	430	+20
12	460	510	+50

Control Group

Student	PSAT	SAT	Difference
1	230	290	+60
2	260	320	+60
3	260	320	+60
4	280	320	+40
5	310	310	0
6	310	330	+20
7	350	320	-30
8	350	310	-40
9	370	370	0
10	380	360	-20
11	380	410	+30
12	380	440	+60
13	410	390	-20
14	430	390	-40
15	460	330	-130
16	480	450	-30

Appendix E

Comparison of score increases to time spent in the program

Student	Points increased	Hours
1	+140	8.5
2	+90	9.5
3	+60	10.0
4	+40	10.0
5	+70	11.0
6	+20	6.5
7	+60	13.0
8	+110	11.0
9	+10	12.5
10	+80	9.0
11	+20	6.0
12	+50	13.0